MONDAY, MAY 26TH, 1856.

JAMES HENTHORN TODD, D.D., PRESIDENT,
in the Chair.

MR. W. R. WILDE read a Paper on the introduction and the time of the general use of the Potato in Ireland,—and its various failures since that period; with some notice of the substance called Bog-butter.

"Some few years ago, having turned my attention to the subject of the 'Food of the Irish,' especially in early times, and written some essays upon it in the 'Dublin University Magazine,' (see Numbers for January and March, 1854), the potato came, in due course and chronological order, under consideration. Having looked into the authorities which bore upon the subject of the early introduction of the potato into Ireland, I then arrived at the conclusion that it became an article of general food, and consequently, as such, was the means of influencing —as far as the mode of producing food, and the constituents and character of that food could be the means of influencing—the moral, physical, social, political, and commercial condition of the people about the middle of the seventeenth century. My attention was again called to the subject by the publication of Mr. Macaulay's 'History of England,' in which he mentions the potato as influencing the feelings and character of the people during the period over which his third and fourth volumes extend. He has twice mentioned the potato (vol. iii. p. 158, and vol. iv. p. 110), and in one instance under very peculiar circumstances—at the siege of Limerick. The beleaguered city, having stood out to the last, capitulated, and then a memorable scene took place—a scene well worthy the attention of the painter and the poet,—on each side of the gate stood the generals of the respective armies, with their attendants; out

marched the soldiers of the garrison to choose their destiny;—and Mr. Macaulay, in describing this scene, took occasion to state—among the various circumstances that influenced the minds of the men who were then either to expatriate themselves, or to remain under what they considered a foreign yoke—the remembrance of their homes, their *potato garden*, and their clamp of turf, with other attractions of a like nature, which still sway the Irish peasantry.

"Recently Dr. John Davy wrote me a letter, in which he questioned this early use of the potato as the general food of the people, on account of the statement in the 'Great Geographical Dictionary,' published in 1694, that, 'in hard times, they [the Irish] lived on water-cresses, roots, mushrooms, shamrocks, oatmeal, milk, and such other slender diet.' I have again looked into some authorities to see whether the views of Dr. Davy are supported, or those which I myself had expressed in the Dublin periodical alluded to, and in which I stated, that in Munster especially the potato formed the staple food of the Irish about the middle of the seventeenth century. The writer in the 'Geographical Dictionary' probably took Spencer and Campion, who wrote more than a century before, as his authorities.

"Some difficulty has attended the investigation of this subject, from the circumstance of inquirers not distinguishing between the true potato, *Solanum tuberosum*, and the 'sweet potato,' *Convolvulus batata*, or, as it is sometimes called by old writers, the Spanish potato.

"It is generally believed that Sir Walter Raleigh introduced the potato into Ireland. Sir Joseph Banks came to the conclusion when he wrote his Essay (being an attempt to discover the time in which the potato was introduced into the British isles) that it was brought by Raleigh into England, and from England into Ireland about the year 1600. It must have been at least before the year 1602, because the estates of Raleigh then passed into the Boyle family, and his connexion with Ireland ceased.

"Clusius, the botanist of Leyden, who wrote in 1586, says the potato was cultivated in Italy prior to that date; and Cuvier denied that Europe derived the potato from Virginia. The researches of Banks also favour this conclusion, and he states that Coccius, in his Chronicle, printed in 1553, mentions potatoes under the term of *papas*. Herriott, who accompanied Raleigh's expedition to Virginia, described them under the name of *openawk*. In Irish they are variously styled *potatee*, *pratea*, or *phottie*, mere Hibernicisms of the English word 'potato.' Sir Robert Southwell, President of the Royal Society, stated, at one of its meetings in 1693, that potatoes had been introduced into Ireland by his grandfather, who first had them from Sir W. Raleigh.

"I would now ask, what had the people to live on in Ireland before Raleigh introduced the potato? While most other nations have had their history transmitted from the days of the hunter and the fisher, clothed in skins, and using weapons either for the chase, their own preservation, or the production of food, and so rising in the scale of civilization from barbarism to the highest amount of cultivation, in which the arts were made subservient to the food as well as to the ornament and education of man—we find this curious fact, that there is no record of such a state of existence in Ireland. The Irish had mills and 'pure white wheat,' and a coexistent state of civilization of which that was but a small portion; because, to raise and to grind corn, and to bake it into bread, was comparatively an advanced state of society. We had in Ireland at that time a social state very different from that alluded to, as being the character of other nations in similar phases of development, and which serves to confirm the idea that we are in all probability descended from a colony previously civilized, which had settled in this country.

"The people lived, in early times, upon corn and milk, and also upon the flesh of oxen and swine—the latter is shown by the details of feasts and royal banquets, descriptions of

which were favourite themes for the recitals of the early bards. Subsequently sheep appear to have been introduced; goats were likewise domesticated, and the remains of domestic fowl have been discovered in early tumuli—a circumstance which upon a former occasion I brought under the notice of the Academy. Corn, peas, beans, and possibly parsnips, with cabbages and onions, formed the vegetable food of the people, prior to the introduction of the potato.

"Gerard, the English herbalist of 1597, is one of the first authors who alludes to the potato, and after him Richard Bradley, F.R.S., in his 'Planting and Gardening,' published in 1634. At a meeting of the Royal Society, in March, 1662, a letter was read, containing a proposal for preventing famine, by dispersing potatoes throughout all parts of England;—this subject is alluded to in Evelyn's 'Sylva.' Threlkeld, the Irish botanist, described the plant in 1726, and says we had it through Thomas Herriott. The late Crofton Croker, in the introductory matter to his 'Popular Songs of Ireland,' has given some very interesting references to the early authorities respecting the introduction of the potato into Ireland, and Mr. MacAdam, of Belfast, has likewise written a valuable treatise on the subject in the 'Quarterly Journal of Agriculture,' for June, 1834-5. 'That potatoes were ordinary food in the south of Ireland,' writes Mr. Croker, 'before the time of the Commonwealth, is shown by "An Account of an Irish Quarter," printed in 1654, in a volume entitled "Songs and Poems of Love and Drollery," by T. W. The writer and his friend visited Coolfin, in the county of Waterford, the seat of Mr. Poer, where at supper they were treated with codded onions, and in the van—

> 'Was a salted tail of salmon,
> And in the rear some rank *potatoes* came on.'

"But although sown in gardens as a rarity, and used at supper as a delicacy, we have no authority for believing that

the potato had become the general or principal food of the Irish peasantry until the middle of the century. That, however, the cultivation of the plant was making rapid progress, may be learned by reference to Cole's 'Adam in Eden, or the Paradise of Plants,'—published in London in 1657, which says:—'The potatoes which we *call* Spanish [not the sweet potato], because they were first brought up to us out of Spain, grew originally in the Indies, where they, or at least some of this kind, serve for bread, and have been planted in many of our gardens [in England], where they decay rather than increase; but the soyle of Ireland doth so well agree with them, that they grow there so plentifully that there be whole fieldes overrun with them, as I have been informed by divers souldiers which came from thence.'* The soldiers alluded to by Cole were those of the Parliamentary forces engaged in Ireland from 1649 to 1653, during a period when Sir William Petty calculated that 616,000 of the Irish and the English in Ireland died by the sword, famine, and pestilence.

"In a paper published in the 'Philosophical Transactions' in 1672, and believed to have been written by Dr. Beale, concerning a strange frost which occurred in England in that year, we read that—in 1629 or 1630 there was a dearth in England; and 'much talk there was then that in London that the had a way to knead and ferment boyled turnips, with a small quantity of meal;' and then he goes on to say, 'potadoes were a relief to Ireland in their last famine; they yield meat and drink.' This famine was evidently that alluded to by Petty in the foregoing reference.

"From the researches which I have made it would appear that the cultivation of the potato was very irregular throughout the country; some localities, especially in Ulster, having only adopted it generally within the memory of the past generation. M'Skimmin, in his 'History of Carrickfergus,'

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* I am indebted to our Treasurer, R. Ball, Esq., for Cole's rare book.

asserts that not more than two generations back potatoes were seldom used after harvest.

"In 1663 Mr. Boyle exhibited some specimens to the Royal Society of London, and read before that body a letter from his gardener at Youghal (the cradle of the potato), in which he describes this esculent as 'very good to pickle for winter salads, and also to preserve. They are to be gathered in September, before the frost doth take them;' and, after describing the best mode of culture, he continues—'I could speak in the praise of the root, what a good and profitable thing it is, and might be to a commonwealth, could it generally be experienced, as the inhabitants of your town can manifest the truth of it.' One would think from this passage that the potato had not then become an article of common food amongst the Irish, beyond the locality where it was first cultivated. Sir William Petty, in his 'Political Anatomy of Ireland,' written in 1672, although not published until 1691, enumerates among the articles of food, 'potatoes from August till May; muscles, cockles, and oysters near the sea; eggs, and butter made very rancid by keeping in bogs;' and in another place he asserts—'that six out of every eight of all the Irish feed chiefly upon milk and potatoes.'

"Certainly the present great historian of England has ample authority for the statement that the potato was cultivated in Ireland to such an extent as to influence the character and feelings of the people, so early as 1689; for, in addition to those authorities already referred to, it is stated in Durfey's 'Irish Hudibras,' published in the May of that year, and in which the esculent is frequently referred to, that after the arrival of William III., the natives are said to have been prevented enjoying their 'Banni-clabber [thick milk] and pottados.' John Dunton, likewise, in his 'Conversation in Ireland,' published in 1699, describes the Irish cabin in his day as having behind it 'the garden, a piece of ground, sometimes of half an acre or an acre, and in this is the turf-stack,

their corn, perhaps two or three hundred sheaves of oats, and as much peas; the rest of the ground is full of their dearly-beloved potatoes, and a few cabbages.' And again, describing the habits of the people generally from Galway to Kilkenny, he says, 'Bonny-Clabber and Mulahaan, alias sowre milk and choak-cheese, with a dish of potatoes boiled, is their general entertainment;' also in the 'keens' of that day, allusion is made to the 'pigs and potato garden.' Moreover, John Haughton, who published his 'Husbandry and Trade Improved' in 1699, when describing the growth of the potato in Ireland, says, it has 'thrived very well and to good purpose, for in their succeeding wars, when all the corn above ground was destroyed, this supported them; for the soldiers, unless they had dug up all the ground where they grew, and almost sifted it, could not extirpate them.'

"As experience has proved the potato to be one of the most fickle of vegetables cultivated to the same extent, the most likely to suffer from atmospheric vicissitudes, and the most liable to disease—one would think that if it had been cultivated in Ireland to such an extent as to constitute the most material portion of the food of the people, its failures would have been noticed in history, contemporaneously with those other losses of food which have been recorded. It is possible, however, that in the earlier years of its general introduction, this crop was not so liable to disease as in later times. In 1725, the use of the potato was so general (at least in parts of the country) as to form nearly the whole winter food of the poor (see Primate Boulter's Letters).

"The first great destruction of the potato crop occurred in the winter of 1739–40, and was attributed to the early, very severe, and long-continued frost of that period. There had been a very wet summer and autumn in 1739; and although the frost, no doubt, was one of the chief causes of its destruction, I am inclined to think that the potato failures in 1739, '40, and '41, were not altogether attributable to the

severity of the winters. When the great frost broke out in the November of 1739, and which increased in intensity during the following month, all the potato crop not already used was in the ground, either undug, or in pits with such a loose covering of earth as was penetrable to the frost. It was said that the potato crop was destroyed in one night; and that 300,000 people perished of famine resulting therefrom. In 1741 the people were cautioned against eating potatoes, which were believed to be diseased, and likely to produce disease in man.*

"The following list of failures in the potato shows how little reliance can be placed on that esculent as the sole food of a nation:—

"1765. A series of unusual wet seasons preceded this year, which was memorable for the quantity of rain which fell in the early part of it, and the excessive drought of summer; potatoes failed; they were scarce and small; as occurred again, under like circumstances, in 1826.

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* Since the foregoing was read to the Academy, I have received the following note from Mr. Curry on the subject:—

"During my residence in London, in the summer of last year (1855), I fell in with a curious Irish poem of several stanzas, in the handwriting of the author, John O'Neachtan, an Irish scholar, well known in and about Dublin, between 1710 and 1750.

"The poem gives a vivid and most graphic description of a battle supposed to have been fought at Cross-bride, somewhere about Tallaght, in the county of Dublin, in the year 1740, between the farmer advocates of the potato, which had been nearly annihilated in the preceding year by the great frost, and the market gardeners and others, who gloried in the destruction of the foreign root, and gave a disinterested preference to the growth of the less prolific and more inaccessible edibles of barley, beans, peas, rye, cabbage, &c.

"The part of this description which may prove of interest to you is that in which the writer always speaks of the potato as the white Spaniard, *Spain-each Geal*, that is, the white or generous-hearted Spaniard; and where he says that they gladdened the people's hearts from the first day of August till Patrick's day."

"In 1770 there was a potato failure, attributed to the *curl*, or disease in the leaves.

"In 1779, Arthur Young informs us that in some of the northern counties the people sprinkled their potato land with lime, in order to prevent the *black rot*.

"In 1784 I am led to believe that the intense frost injured the potato. Latterly, people seem to be aware of the deleterious effects of frost, and denominate the potato so injured '*spuggaun*,' from its softness.

"The year 1795 was one of unusual character, both in Europe and America: the weather here was uncommonly severe, the spring cold and late, the summer suffocatingly hot, damp, and rainy, while south winds were prevalent. There was a disease among vegetables, especially potatoes and cabbages.

"In 1800 there was a partial failure of the potato, owing to excessive drought; the disease appeared in the stalks; the harvest generally was bad; great scarcity and distress succeeded. The potato also failed in England, and for some years afterwards the *curl* injured many of the best varieties there.

"1801. A very general potato failure, attributed to obstructed vegetation, while the sets were yet in the ground.

"1807. The frost, which set in about November with unusual severity, destroyed nearly one-half of the potato crop.

"In 1809 the *curl* again injured the potatoes, though not to such an extent as to deserve the name of a failure.

"1811. The spring and early summer of this year were excessively wet; a partial failure of the potato crop occurred.

"In 1812 some of the early planted potatoes failed.

"In 1816 the spring was unusually backward, the summer and autumn also very late, and the whole year characterized by far more than the average amount of rain; the potato again failed very generally throughout the kingdom. At this time the stalk was the part chiefly affected. The potato crop in England was also especially defective, which shows how wide-

spread and malignant were the peculiar atmospheric influences which characterized that period. The accounts of this epidemic in England state that, early in September, the potatoes were 'blackened and spoiled; they smell at a distance the same as after a frosty night late in October'—symptoms which indicated a similarity between the epidemic of that period and the one with which we have lately become so familiar.

"1817. This was called the year of the malty flour. The potato crop was very deficient; hence, continued scarcity during the ensuing winter.

"A great quantity of snow fell in the end of 1820, and extensive inundations followed, which produced remarkable telluric phenomena early in the following year; for instance, the 'moving bog.'

"May and June, 1821, were dry, cold, and frosty; but the autumn was one of unusual moisture: the rain accumulated upon the surface of the ground, the rivers and lakes swelled, and the floods spread far and wide over the face of the land, the rain continuing to pour in torrents during November, December, and part of the following January. The potato crop soured and rotted in the ground; and although a sufficiency was obtained in the dry and upland districts to support human life for some months, it was expended early in the ensuing spring. Fortunately, these effects were not general throughout the kingdom, but occupied a district which might be defined by a line drawn from the Bay of Donegal, upon the north side, at the junction of the counties of Sligo and Leitrim, to Youghal Harbour, where the counties of Cork and Waterford border on the south, thus including the whole western seaboard of Sligo, Mayo, Galway, Clare, Limerick, Kerry, and Cork; all exposed to the full force of the Atlantic, the influence of which, though mild, is moist.

"In 1825 the seasons were mild, yet we read of a partial failure of the potato crop, as may be instanced by the rise in the price of potatoes.

"The year 1829 was wet, and the month of August particularly so; the crops were beaten down by the heavy rains and severe storms, and in all the low grounds the water overran the potatoes, and so remained for many weeks; thus a great quantity of the potatoes were lost this year also.

"In 1830 violent storms and heavy rains brought upon the west of Ireland another failure of the potato, with its usual accompaniment of famine and pestilence: but it was principally confined to the coasts of Mayo, Galway, and Donegal. This blight was common to parts of America and to Germany, where it continued for two years.

"In 1832, and for several years following in succession, an unmistakable epidemic attacked the potato in spring throughout Ireland, and also extended to other parts of Europe and to America.

"In 1833 the potato disease presented not only the appearance of the *curl*, but likewise attacked the tubers in the pits.

"In 1834 the failure was chiefly observed in the early-planted potatoes, but having been discovered in spring, was, to a certain extent, remedied.

"Although there was an intermission in 1835, a partial failure of the potato was observed in several parts of Ireland in 1836, which had been wet, and July and August unusually so; the price of food rose to an almost unparalleled height.

"I have not found any account of a special failure of the potato crop in the wet year of 1838, but the 'inherent constitutional weakness' of that esculent was observed, and the deterioration in the best kinds formed the theme of public remark at the time.

"In 1839 there was an unmistakable failure of that crop, attributed to the incessant rains, and the extensive inundations; in New England, in this year, the *black rust* 'struck [the potato] universally on the 27th of August.'

"The year 1839 was distinguished by an amount of mois-

ture unparalleled, according to modern observations; and part of 1840 was likewise characterized by excessive moisture; although there was less rain than in the previous year, yet it came down at an unpropitious period; the potato crop failed again in Leinster and Munster; and upon both occasions great distress followed. The Scotch islands of Arran and the Highlands are said to have suffered from partial potato failures yearly, from 1839 to 1842 inclusive. In 1840 the potato disease prevailed to such a degree in Germany as to threaten the total extinction of that esculent; and in the following year the crop was extensively affected there with a disease called '*dry gangrene.*'

"In 1841 excessive rains occurred in August, causing a partial destruction of crops, especially in the south of Ireland; the year was cold and frosty, and although not specially characterized for its wetness, the number of days upon which rain fell was very great.

"In 1842, which was more than usually unfavourable to vegetation, although the harvest generally was good, the potato crop was injured by the inundations.

"1843 was more fatal to animal than vegetable life in Ireland; but in other countries, and especially in North America, the potato suffered severely from the *dry rot*—evidently the commencement of that great *blight* which prevailed so generally during the ensuing five or six years.

"In 1844, the severity of the seasons again acting prejudicially upon vegetable life, there was a partial failure of the potato, and destitution again followed in its wake. The failures were noted early in spring, shortly after the seed was planted; and even in June, the first symptoms of that vegetable pestilence, which laid the foundation of the late misery, appeared. Although the crop was reported generally a good one, acute observers remarked what was then termed the degeneracy of the tubers, and prognosticated that the future crop would either fail entirely when any additional

predisposing causes ensued, or would send up a puny and diseased stalk. In America, also, although the weather was dry, the potato crop was defective, having suffered from *blight;* symptoms of the disease likewise appeared, late in the autumn of this year, in England, especially in Kent and Devonshire.

"1845. General potato failure. The disease, which had already manifested itself in North America, first appeared generally in Great Britain and Ireland late in the autumn of this year; it also extended throughout Scotland, and was very destructive in Holland, Belgium, France, and Germany.

"1846. Complete and general potato failure throughout all Ireland.

"1847. Very extensive potato failure. Turnips and other green crops were also injured. There was a failure in the beans similar to that in the potato.

"1848. Extensive potato failure. At the end of July and beginning of August the usual blight was again reported, but not so general as in 1846.

"1849. Potato failures reported from various parts of the country.

"1850. The potato blight appeared in some localities, but to a partial extent only.

"1851. Slight and partial potato failure.

"Partial and localized failures were reported during the summers and autumns of 1852, 1853, and 1854.

"Thus we find that partially in 1845, almost entirely in 1846, very extensively in 1847, and nearly as much so in 1848, the potato, as a crop, failed; and as the disease rose, so it sunk, for in 1849 and 1850, potato failures, although not general, were both intense and widely extended. Like the invasion of other great epidemics affecting man or animals, the violence of which approaches a culminating point and then abates, so the late potato disease slowly and insidiously progressed, until it reached its acme, during 1846, 1847, 1848, then stood still, and gradually, year by year, gave way, until the

severe frost of 1855 appeared to have so far altered the conditions of the atmosphere, that this esculent again assumed a healthy character, and regained its natural flavour.

"Even yet we read that, in the Cahirciveen Union, 'last season, there was a more extensive and destructive failure of the potato crop than was experienced there for the previous seven years; and the consequence was that, from the 1st of August up to the present date, no less than £29,000 worth of Indian corn and meal was landed on Cahirciveen quay for home consumption.'—*Kerry Evening Post.* This blight was, however, very local.

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"In enumerating the food of the Irish, Petty mentioned 'butter made rancid by keeping in bogs;' and in the Irish Hudibras we read of—

> —— 'Butter to eat with their hog,
> Was seven years buried in a bog.'

"When I originally read the statement of Petty, I came to the conclusion that he was wrong, and that this bog butter was much older than his time, but I have learned to correct that opinion. Why or wherefore the people put their butter in bogs I cannot tell, but it is a fact that great quantities of this substance have been found in the bogs, and that it has invariably assumed the physical and chemical characters presented by the specimen now before the Academy. It is converted into a hard, yellowish-white substance, like old Stilton cheese, and in taste resembling spermaceti; it is, in fact, changed into the animal substance denominated *adipocere.* Two questions arise, at what time the Irish ceased to bury butter, and how long it would take to produce this change in it.

"From the 'Mechanics' Magazine,' for September, 1824, we learn that this substance, there styled 'mineral tallow,'

was first discovered in Finland in 1736. About the year 1820, a quantity of it, then called 'mountain tallow,' was discovered on the borders of Loch Fyne, in Scotland, and was described in the 'Edinburgh Philosophical Journal,' vol. xi.

"In 1817, a mass of this bog butter or tallow, weighing about 23 lbs., was discovered in a bog on the Galtee Mountains. In June, 1826, a tub, containing about 21 lbs. weight of this substance, was found in a bog near Ballinasloe; it was presented to the Royal Dublin Society by Lord Dunlo, and was described by Professor Edmund Davy in the Proceedings of that body. Since then, very many specimens of this substance have been found; we possess three or four very fine samples in the Museum of the Academy; and other collections, both public and private, contain several examples. It is almost always found in wood, either in vessels cut out of a single piece, like large *methers*, or in long firkins, of which there is a good example in the Museum. So far as I can gather, the bog butter is always found at a great depth, ten or twelve feet, at least, in old, solid bogs. Whether the vessels were originally buried at that depth; whether they were placed nearer the surface, and in lapse of years sunk; or whether the bogs have grown over them, are questions I cannot determine. How many years it would take to produce in tallow, suet, or butter, the remarkable change exhibited by all the specimens which have been discovered, is a question of much interest; in connexion with which I may state the curious fact lately mentioned to me, that when the common fosses of Paris, into which a great number of bodies had been thrown in 1793, were opened a few years ago, it was found that the substance into which they had been converted was an *adipocere* somewhat resembling this bog butter.

"In the 'Edinburgh Philosophical Journal,' to which I have alluded, will be found the first analysis of this substance that I am aware of. Professor E. Davy made a very careful examination of it in 1826, the results of which are published

in the Proceedings of the Royal Dublin Society for that year; I understand that a German, named Luck, published another analysis of it about ten years ago; and I have recently received the following communication from Mr. Sullivan, of the Museum of Irish Industry, who has paid much attention to thesubject; —

"'I have obtained from every specimen which I examined more or less of all the peculiar oily acids of butter, which renders it more than probable that they were all originally butter. I may, however, observe, that the finding of these would not amount to absolute proof as to the substance being butter, as I have obtained butyric acid by the slow decomposition of flour under water; also from brain and meat, with fatty tissues attached; and we also know that all these acids can be produced by the oxidation of fats generally. One of the reasons which led me to think that they were originally butter is, that scarcely any of the other volatile acids of the series, produced by the oxidation of fats, besides those obtained directly from butter, are usually present in bog butter. I never detected the presence of salt in any of the specimens which I examined, at least not in any quantity to warrant the supposition that if it had been butter it was salted. In connexion with this result, which otherwise would be a great objection to the idea of its having been originally butter, it is well to bear in mind that butter is even now made in Cork and in the town of Antrim without salt.'

"Two circumstances may have influenced those who buried this butter: it was done either for the purpose of security, or in order to produce that very change in it which Petty calls rancid. In Classin and Povelson's 'Travels in Iceland,' we read that the peasantry and poor people eat in winter what is called sour butter, which is preserved without salt; and although it becomes in time acid, it may be preserved for more than twenty years. In former times there were public magazines attached to each bishop's see, in which great quantities of

this acid butter were stored up against years of scarcity; but we read, 'when the sour butter is too old, it loses in its acidity and weight, dries up, and acquires a *rancid* taste.' The most remarkable reference to the substance under consideration, and one that serves to throw most light upon the subject, is that contained in Debe's Description of the Faroe Isles in 1670; it is there called (according to the English translation) preserved tallow and 'Rue tallow,' and was thus treated: the tallow, principally obtained from sheep, was cut in pieces, and allowed to rot awhile; it was then rendered, and cast into large pieces, which 'they dig and put in moist earth to keep it, it growing the better the longer it is kept, and when it is old and is cut, it tasteth like old cheese. The most able peasants have ever much endeavoured to bring together a great quantity of that tallow, so that a countryman had sometimes in the tallow dike (that is, a place in the earth where it is kept) above 100 loads, and this hath always been looked upon as the greatest riches of Feroe. For when sheep dye, such tallow is very necessary in the land, the longer it is kept being so much the better; and forreign pyrates having little desire to rob it from them. It may, therefore, not unreasonably be termed a hidden treasure, which rust doth not consume, nor thieves steal away.' "*

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Mr. David Moore and Dr. Aldridge made some remarks.

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Rev. J. H. Jellett read a Paper on the effect of the internal fluidity of the earth on the length of the day.

The researches of Mr. Hopkins have shown that the effect of the action of the sun and moon upon the spheroidal figure

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* "Fœroæ, et Fœroa Reserata; that is, a Description of the Islands and Inhabitants of Foeroe. Written in Danish, by Lucas Jacobson Debes, M. A., and Provost of the Churches there. Englished by John Sterpin, Doctor of Physic." London, 1676.